

Work Order ID 148649

Wednesday, July 06, 2016 8:37:53 AM

148649

Page 1

Item ID: D6103-003 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Round Billet, Aluminum
 Start Date: 6/20/2016 Start Qty: 16.00 ***16*** Cust Item ID:
 Required Date: 7/5/2016 Req'd Qty: 16.00 ***16*** Customer:
 Reference:

Approvals: Process Plan: **DAS 21** Date: **JUL 08 2016** Tooling: Date: Run Start ***NR1***
 QC: **9-89** Date: SPC (Y/N): Date: Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
D6103	Rev B

100	PURCHASING	0.00							DAS 13 9-89
-----	------------	------	--	--	--	--	--	--	--------------------

100
 Purchasing
 Purchasing
 Memo
 Issue P/O: 33006 a) Description: Alluminum round billet b) Ø3.500" x 12.500" long c) Tolerance on all dimensions are +0.030"/-0.000"
 d) Material: 7075-T7351 (QQ-A-225/9) Material certification required

110	Receive & Inspect for Damage & Mat'l Certs	0.00							
-----	--	------	--	--	--	--	--	--	--

110
 Packaging
 Packaging
 Memo
 Ensure material certification is attached

120	QC6- Inspect dimensions to drawing	0.00							
-----	------------------------------------	------	--	--	--	--	--	--	--

120
 QC
 Quality Control
 Memo

16 JUL 13 2016 **DAS 13 9-89**
16x SP16-7-15
16 16/07/21 **DAS 14 9-89**

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width: 100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td style="border: none;"></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																						
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																						
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																						
Large Fab ☐	Composite ☐	Supplier ☐																							
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval																		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval																	
Root Cause		FAULT CATEGORY																							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐				Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐				Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐				Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐											
		OTHER : ☐																							

Work Order ID 148649

Wednesday, July 06, 2016 8:37:53 AM

148649

Page 2

Item ID: D6103-003

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Round Billet, Aluminum

Start Date: 6/20/2016 Start Qty: 16.00

16

Cust Item ID:

Required Date: 7/5/2016 Req'd Qty: 16.00

16

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	Identify as per dwg & Stock Location: <u>MAT043</u>	0.00							DAS 14 9-89
130						16	0		16/07/19
Packaging	Memo	0.03							
Packaging	LOCATION: MAT043								
140	QC21- Final Inspection - Work Order Release	0.00							DAS 21 9-89
140								JUL 20 2016	
QC	Memo	0.27							
Quality Control									

DAS
21
9-89

JUL 20 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	

Root Cause				FAULT CATEGORY			
Environment ☐	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐
Design ☐	☐	Operator	☐	Bending	☐	Set-up	☐
Doc/Data ☐	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐
Equip/Tooling ☐	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐
Handling/Pre ☐	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐
Material ☐	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐
Internal Transport ☐	☐	Poor Information	☐	Crushing	☐	Countersink	☐
Tribal Knowledge ☐	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐
LOA ☐	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐
Substation ☐	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐
Past Expiry Date ☐	☐	Manufacturing Process	☐	OTHER :			
Misidentified ☐	☐	Past Due	☐				

Picklist Print

Wednesday, July 06, 2016 8:37:53 AM

Page 1 / 1

Work Order ID: 148649

148649

Parent Item: D6103-003

D6103-003

Parent Item Name: Round Billet, Aluminum

Start Date: 6/20/2016

Required Date: 7/5/2016

Start Qty: 16.00

Required Qty: 16.00

Comments: IPP Rev:A New Issue 06-02-09 JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D6103-003P		Purchased	No			110	Each	0.0000	1	16			
D6103-003P									**				
Round Alum Billet													

16x 80/6-7-15

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

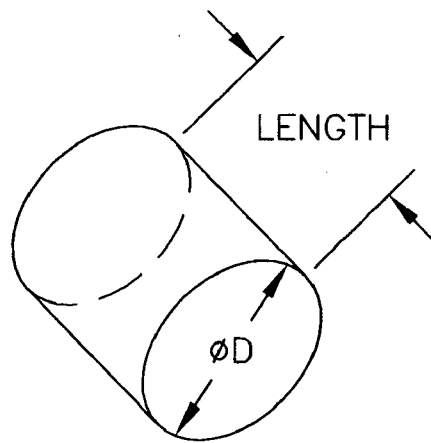
Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								



DESIGN PH	DRAWN BY PH	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED [Signature]	APPROVED [Signature]	DRAWING NO. D6103	Rev. B SHEET 1 OF 1
DATE 06.01.31		TITLE ROUND BILLET, ALUMINUM	SCALE NTS
A	01.04.10	NEW ISSUE	
B	06.01.31	ADD D6103-003	

SPECIFICATION CONTROL DRAWING

RELEASED
06.02.07



SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 198697 MLS
/6-07-08

PURCHASE MATERIAL ACCORDING TO THE FOLLOWING TABLE. SPECIFY ALLOY, DIAMETER x LENGTH (+0.030/-0.000) AS SHOWN.

TOLERANCE ON ALL DIMENSIONS IS +0.030/-0.000.

ALL DIMENSIONS ARE IN INCHES.

Part No.	Alloy	D (Diameter)	Length
D6103-001	7075-T6/T651 (QQ-A-200/11 OR QQ-A-225/9)	Ø3.250	12.50
D6103-003	7075-T7351 (QQ-A-225/9)	Ø3.500	12.50

Copyright © 2001 by DART AEROSPACE LTD

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID PO33007

Purchase Order Date 7/13/2016

PO Print Date 7/13/2016

Page Number 1 of 2

Order From :
METAUX CASTLE
P.O. BOX 4090 STN A
TORONTO, ONTARIO M5W OE9
CANADA

VU-MET002

Ship To : DART AEROSPACE LTD
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

E-MAILED

Contact Name

Vendor Phone

Ship To Contact

Ship To Phone

Ship Via: Yours ppd

Ship Acct:

Buyer

Customer POID

Customer Tax #

Terms

Currency

FOB

Chantal Lavoie

10127-2607

Net 30

USD

Destination-Collect

JUL 13 2016

Line Nbr	Reference Vendor Part Number Line Comments Delivery Comments	Description/ Mfg ID	Req Date/ Taxable Promise Date	CD	Req Qty/ Unit of Measure	PO Unit Price	Extended Price
----------	---	------------------------	--------------------------------------	----	--------------------------------	---------------	-------------------

1	D6101-007P	7075-T7351 8.25X7.75X2.5	7/28/2016		20.00	\$56.11	\$1,122.20
			Yes		Each		
			7/28/2016				

AS PER DWG D6101 REV. B
B148712
MATERIAL: 7075-T7351 (QQ-A-250/12)
SIZE: 7.750" X 8.250" X 2.50" THICK
GRAIN DIRECTION ALONG: 7.750" LENGTH
TOLERANCE AS PER QUOTE +.030"/-.000"

Line Total: \$1,122.20

2	D6103-003P	Round Alum Billet	7/28/2016		16.00	\$36.30	\$580.80
			Yes		Each		
			7/28/2016				

AS PER DWG D6103 REV. B
B148649
MATERIAL: 7075-T7351 AS PER QQ-A-225/9
SIZE: 3.500" X 12.500" LONG

Sp/16-7-15

Line Total: \$580.80

Note:

7/13/2016

**Castle Metals®**

A. M. Castle & Co.

PACKING SLIP/
CERTIFICATE OF CONFORMANCE

Page 1 of 2

Shipment No:3024852

Ship From: A. M. CASTLE & CO. 2150 ARGENTIA ROAD MISSISSAUGA, ON L5N 2K7 CAN		Sold To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA		Ship To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CAN		Deliver To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA	
Date Shipped	F.O.B.	Freight Terms		Carrier		BOL No	
14-JUL-16	ORIGIN	Prepaid		MANITOULIN		3024852-2	

Shipment Details	Final Destination Branch - TOR
-------------------------	---------------------------------------

Order No 4427957	Line No 1	Item No 8808.MO	Description 3.5000..RD.7075.T7351.ALUMINUM.CF.144.0000 CUT TO 12.5 IN (+ .1250/- .0000 IN) - BAND SAW CUTTING SPECIFICATIONS: QQ-A-225/9 Email P/s and certs to: clavoie@dartaero.com				
Purchase Order No 33007		Part Number YOUR ITEM NUMBER: D6103-003		Ordered Qty 16.00 PCS		Invoice Qty 16.00 PCS	
Details		ALL PAPERWORK MUST FOLLOW ORDER / CUSTOMER MUST RECEIVE AT TIME OF DELIVERY ALL MATERIAL MUST HAVE IDENTIFYING MARKINGS EX:HEAT #'S Email P/s and certs to: clavoie@dartaero.com END USER: DART AEROSPACE END USE: COMMERCIAL AIRCRAFT PARTS SP/16-7-15.					
Delivery No. 120483615	Mill KAISER ALUMINUM	Heat Number 	Mech Id	PCS 16	Width (IN)	Length (IN)	Shipped Qty(LBS) 194.0060

These commodities/technologies are subject to US Export Administration & US State Dept. Regulations and, if intended for export, were/are exported thereunder. Diversion contrary to US Law is Prohibited.

We hereby certify the material covered by this certification conforms in accordance with the above specifications and has been found to meet the applicable requirements for the material, including any specifications forming a part of the description. Test reports are on file subject to examination. All claims for defective material are waived unless made in writing to A.M. Castle & Co. within 60 days of the shipment. Material cut to the correct size, or material cut by the customer cannot be returned.

These commodities, technology or software were exported from the United States in accordance with the Export Administration Regulations. Diversion contrary to US law prohibited.

Date Printed: 14-JUL-2016 05:08:44 PM



Castle Metals®

A. M. Castle & Co.

PACKING SLIP/
CERTIFICATE OF CONFORMANCE

Page 2 of 2

for credit.	
Reviewed by Authorized Castle Metals Representative:	Date: Name:

Chris Galt

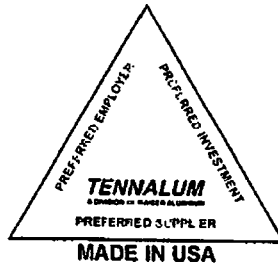
JUL 14 2016



SP/6-7-15

KAISER ALUMINUM FABRICATED PRODUCTS

Tennalum
309 Industrial Drive
Jackson, TN 38301
731-423-2811



CERTIFIED TEST REPORT
<http://Online.KaiserAluminum.com>

CUSTOMER PO NUMBER: 354591-1		CUSTOMER PART NUMBER: 8808		PRODUCT DESCRIPTION: Cold Finished Round	
KAISER ORDER NUMBER: 706985	LINE ITEM: 1	SHIP DATE: 10/19/2015	ALLOY: 7075	TEMPER: T7351	
WEIGHT SHIPPED: 2106 lbs.	QUANTITY: 15 pcs.	B/L NUMBER: 38847	DIAM/DAF/THKNS: 3.500 in.	WIDTH: 0.000 in.	LENGTH: 144.0 in.
SHIP TO: A M Castle & Co 26800 Miles Road Bedford Heights, OH 44146 USA			SOLD TO: A M Castle & Co 1420 Kensington Road Suite 220 Oak Brook, IL 60523 USA		

Test Code: 1000 AC

Actual Physical Properties

Lot Number	LONG. UTS ksi	LONG. YTS ksi	LONG. ELONG. %	COND % IACS
20195799	70.6	59.5	14.5	39.0
20196427	70.8	59.2	16.0	39.4
20197461	70.0	58.0	15.5	39.9

DAS
14
9-09

11/07/29

Chemical Composition, WT. % (Aluminum Remainder)

	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	OTHERS EACH	OTHERS TOTAL	Lot
Actual	0.13	0.28	1.4	0.03	2.7	0.19	5.8	0.03			20195799
Actual	0.10	0.23	1.4	0.02	2.7	0.19	5.9	0.03			20196427
Actual	0.12	0.23	1.4	0.02	2.6	0.19	5.8	0.03			20197461
Max	0.40	0.50	2.0	0.30	2.9	0.28	6.1	0.20	0.05	0.15	
Min			1.2		2.1	0.18	5.1				

Specifications

Standard: ISO 9001, ASTM B211-12, AMS 4124E, AMS-QQ-A-225/9A Non-Standard: A97075_11_R14

CERTIFICATION

Kaiser Aluminum Fabricated Products, LLC ("Kaiser") hereby certifies that the metal shipped under this order has been inspected and tested and found in conformance with the applicable specifications forming a part of the description set forth in Kaiser's sales acknowledgment form. Any warranty is limited to that shown on Kaiser's general terms and conditions of sale. Test reports are on file, subject to examination.

John Rennekamp, Quality Manager

John Rennekamp

Plant Serial: 22220.

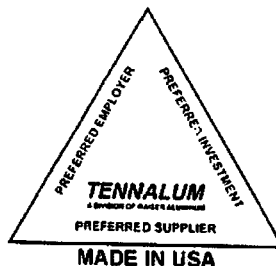
Kaiser Order Number: 706985

Line Item: 1

KAISER ALUMINUM

FABRICATED PRODUCTS

Tennalum
309 Industrial Drive
Jackson, TN 38301
731-423-2811



CERTIFIED TEST REPORT

<http://Online.KaiserAluminum.com>

Miscellaneous Notes

Made in USA

This material was melted and manufactured in the USA. Mercury is not a normal contaminant in aluminum alloys. Neither mercury nor any of its compounds were utilized by Kaiser Aluminum in the manufacture of this material. AS9100C:2009 The recording of false, fictitious or fraudulent statements or entries on the certificate may be punished as a felony under federal law.

This material meets the requirements of (cold finished) T73 temper and QQ-A-225/9E (CANCELLED). NAFTA - YES. Material complies with FAR BAA (FAR 52.225-1, Buy American Act-Supplies), DFARS BAA (DFARS 252.225-7001 Buy American Act & Bal of Payments Prog), and FAR TAA (FAR 52.225-5 Trade Agreements). No weld repair. This material is RoHS 2 - 2011/65/EU compliant.

CERTIFICATION

Kaiser Aluminum Fabricated Products, LLC ("Kaiser") hereby certifies that the metal shipped under this order has been inspected and tested and found in conformance with the applicable specifications forming a part of the description set forth in Kaiser's sales acknowledgement form. Any warranty is limited to that shown on Kaiser's general terms and conditions of sale. Test reports are on file, subject to examination.

John Rennekamp, Quality Manager

Plant Serial: 222202

Kaiser Order Number: 706985

Line Item: 1

MATERIAL RECEIPT INSPECTION FORM

PO / BATCH NO 33006/148649

MATERIAL DC103-003
DATE 16/07/19

MATERIAL CERT REQD yes
QUANTITY RECEIVED 16
QUANTITY INSPECTED 16
QUANTITY REJECTED _____

THICKNESS ORDERED 03.500X12.500
THICKNESS RECEIVED 03.500X12.500
SHEET SIZE ORDERED _____
SHEET SIZE RECEIVED _____

DESCRIPTION	NCR (Check Y/N)		COMMENTS
SURFACE DAMAGE	☒ Y	☒ N	
CORRECT FINISH	☒ Y	☒ N	
CORROSION	☒ Y	☒ N	
CORRECT GRAIN DIRECTION	☒ Y	☒ N	
CORRECT MATERIAL	☒ Y	☒ N	
CORRECT THICKNESS	☒ Y	☒ N	
PHOTO REQUIRED	☒ Y	☒ N	
CORRECT MATERIAL	☒ Y	☒ N	
CORRECT REF # TO LINK CERT	☒ Y	☒ N	
CORRECT MATERIAL IDENTIFICATION	☒ Y	☒ N	
CORRECT M# ON THE MATERIAL	☒ Y	☒ N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	☒ Y	☒ N	
DOES THIS REQUIRE AN EXTRUSION REPORT	☒ Y	☒ N	

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK RECORD RESULTS BELOW				
	HRC	HRB	DUR A	DUR D
TYPE OF MATERIAL				
SIZE OF TEST SAMPLE				
HARDNESS / DUROMETER READING				

testers located in the Quality Office

QC 18 INSPECTION		ENGINEERING SIGNOFF (if required)	
INSPECTED BY <u>DAS</u>	SIGNED OFF BY _____		
DATE <u>16/07/19</u>	DATE _____		

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

MATERIAL RECEIPT INSPECTION FORM

INSTRUCTIONS FOR INSPECTING BAR, TUBING, ROUND, & SHEET STOCK

1. VERIFY STOCK TO DART PURCHASE ORDER
2. MEASURE ALL DIMENSIONS FOR EACH PURCHASED STOCK
 - a. WIDTH, THICKNESS, DIAMETER, WALL THICKNESS & LENGTH
3. VERIFY CONDITION OF MATERIAL (e.g. DAMAGED, CORRODED, etc)
4. VERIFY THAT SUPPLIER HAS A NUMBER (HEAT #) ON ITS RECEIVING REPORT TO LINK TO MATERIAL CERTS
5. VERIFY MATERIAL CERTS ARE CORRECT TO THE DART PO INSTRUCTIONS
6. REMOVE / CUT A PIECE OF MATERIAL FOR SAMPLE HARDNESS TESTING

INSTRUCTIONS FOR INSPECTING SKIDTUBE & STEP EXTRUSION

1. VERIFY TO DART SUPPLIED DRAWING
 2. SAMPLE INSPECT MATERIAL IN BUNDLE TO ENSURE MATERIAL CAN BE RECEIVED INTO DART
 3. USING PORTABLE HARDNESS TESTER VERIFY HARDNESS OF THE MATERIAL TO THE DRAWING
 4. VERIFY THAT MATERIAL CERTS MATCH TO WHATS CALLED UP ON THE DART DRAWING
- AFTER MATERIAL PASSES INSPECTION**
5. HAVE DART EMPLOYEES START STOCKING MATERIAL BUT REQUEST MIN 20pcs FOR FULL INSPECTION
 6. INSPECT ALL DIMS AS PER DRAWING REQUIREMENTS

INSTRUCTIONS FOR INSPECTING CROSS TUBE MATERIAL

1. VERIFY MATERIAL CERTS MATCH THE REQUIREMENTS ON THE DART DRAWINGS
2. INSPECT MIN HALF THE BATCH OF EXTRUSION RECEIVED INTO DART
3. INSPECT MATERIAL AS PER THE EXTRUSION REPORT
 - a. WALL THICKNESS USING ULTRA-SONIC IN 4 LOCATIONS
 - b. OUTSIDE DIAMETER HIGHEST/LOWEST BOTH ENDS
 - c. INSIDE DIAMETER HIGHEST/LOWEST BOTH ENDS
 - d. STRAIGHTNESS @ CENTER OVER 12" SPAN
 - e. WALL THICKNESS USING TUBE MICROMETER HIGHEST/LOWEST BOTH ENDS
4. IDENTIFY EACH TUBE IN SEQUENCE OF INSPECTING (TUBE 1, TUBE 2, ...) AND W/O# AND PO#
5. RECORD ALL FINDINGS ON EXTRUSION REPORT

IF ANY QUESTIONS PLEASE SEE OC COORDINATOR BEFORE GOING FURTHER